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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,921	06/30/2000	Hiroaki Yasuda	Q58681	9683
7590	07/26/2005		EXAMINER	
Sughrue Mion Zinn Macpeak & Seas PLLC 2100 Pennsylvania Avenue NW Washington, DC 20037-3202			LU, TOM Y	
			ART UNIT	PAPER NUMBER
			2621	
DATE MAILED: 07/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/607,921	YASUDA, HIROAKI
Examiner	Art Unit	
Tom Y. Lu	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 April 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6,8-12 and 15-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1-3,17,19,22-24 and 27-29 is/are allowed.
- 6) Claim(s) 4-6,8-12,15,16,18,20,21,25,26,30 and 31 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment and written response filed on 4/29/2005 has been entered and considered.
2. Claims 7 and 13-14 have been cancelled.
3. Claims 27-31 have been added.
4. Claims 1-6, 8-12 and 15-31 are pending.

Response to Arguments

5. Applicant's arguments, see Remarks, pages 11-13, filed on 4/29/2005, with respect to claim 1, have been fully considered and are persuasive. The rejection of claim 1 has been withdrawn.
6. Applicant's arguments filed on 4/29/2005 have been fully considered but they are not persuasive. Independent claims 4 and 8 are directed to a system and a terminal. The examiner notes although some functions performed by the system or terminal components are distinguishable over the Honda reference, nonetheless, they are not structurally distinguishable over the Honda's system. See MPEP section 2114, "While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); < In re

Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-6, 8-9, 11-12, 15-16, 18, 20-21 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda et al (U.S. Patent No. 5,233,989).

a. Referring to Claim 4, Honda discloses an image transfer and output system (system 100 as shown in figure 1), comprising: an image signal input apparatus (the combination of X-ray tube and TV camera is the claimed input apparatus) for feeding a plurality of original image signals representing radiation image information (X-ray image signal X_i are the claimed a plurality of original image signals), an operation processing device (subtraction 8 and average-value calculator 10) for performing predetermined operation processing on the plurality of the original image signals to obtain an operation-processed image signal (signal S_i), an image output device for performing image outputting in accordance with a received original image signal (display 16 outputs original signal X_i , column 4, lines 60-61), and a transfer device for transferring an image signal (the lines, between A/D 5 and image buffer 7, between original image frame memory 6 and

display 16, and between judging unit 14 and display 16 are the claimed transferring device for transferring image signals). Note the claim limitations in the wherein clause are functional limitations in an apparatus claim, and they are rejected as being inherently defined by the structural components. (MPEP section 2114, "While features of an apparatus may be recited either structurally or functionally, claims directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)").

- b. Referring to Claim 5, Honda discloses wherein the operation processing device is located on the side of the image output device (see figure 1), the transferring device transfers the plurality of the original image signals to the operation processing device (the linking line between A/D 5 and subtraction 8 transfers a plurality of image signals for processing), and the operation processing device performs the operation processing on the plurality of the transferred original

image signals (combination of subtraction and average-value calculator performs process on a plurality transferred image signals).

- c. Referring to Claim 6, Honda discloses wherein the operation processing device is located on the side of the image signal input apparatus (see figure 1), and the transfer device transfers the operation-processed image signal, which has been obtained from the operation processing device, to the image output device (the linking line between the judging unit 14 and display 16 transfers processed signal Sm to the display 16).
- d. Referring to Claim 8, Honda discloses an image output terminal (system 100), comprising: an operation processing device for performing predetermined operation processing on a plurality of original image signal to obtain an operation-processed image signal; and an image output device for outputting one original image signal and an operation processed image signal (see explanation in claim 4), and unaddressed claim limitations are functional limitations in an apparatus claims, they are rejected as being inherently defined by the structural components (see explanation in claim 4).
- e. Referring to Claim 9, Honda discloses the transfer device comprises a network (a network is defined by two communication nodes, the linking lines linking between at least two nodes are considered as a network).
- f. Referring to Claim 11, Honda discloses wherein the image signal input apparatus comprises a CR apparatus (X-ray tube 1 is a CR apparatus).

- g. Referring to Claim 12, Honda discloses a CRT display as an output device, not an LCD display. However, these two displays are art-recognized equivalents as to displaying images, one of ordinary skill in the art would have found it obvious to substitute one of the other.
 - h. With regard to Claim 15, see explanation in Claim 12.
 - i. With regard to Claim 16, see explanation in Claim 9.
 - j. Referring to Claim 18, Honda discloses a network interface, which is inherently contained; otherwise two nodes/devices would not be able to communicate.
 - k. Claim 20 is rejected as reciting functional limitations in an apparatus claim, and the functional limitations are inherently defined by the structural components.
 - l. With regard to Claim 21, see explanation in Claim 20.
 - m. With regard to Claim 25, see explanation in Claim 20.
 - n. With regard to Claim 26, see explanation in Claim 20.
8. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Luo et al (U.S. Patent No. 5,901,240). The arguments in Paragraph 7 above as to the applicability of Honda are incorporated herein. Honda discloses using X-ray tube 1 as shown in figure 1. However, Honda does not teach using a CT scanner. Luo at column 5, line 14, teaches using a CT scanner to obtain digitized X-ray images. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a CT scanner. One of ordinary skill in the art would have been motivated to do this because a CT scanner is just another means of acquiring radiation images. In addition, Luo at column 5, lines 13-15 teaches

using a diagnostic scanner like CT produces an electronic x-ray image which is digitized, which eliminates the A/D converter 5 in Honda's system.

9. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Hishinuma et al (U.S. Patent No. 4,683,377). The arguments in Paragraph 7 above as to the applicability of Honda are incorporated herein.

- a. Referring to Claim 30, Honda discloses obtaining two original images in a temporal manner, which stores the earlier image X_{i-1} at an image buffer, and waiting for the next image X_i , and then transferring two images into subtraction 8 to obtain an subtraction image G_i . Hishinuma discloses obtaining two radiation images at the same time, which means two image are outputted in parallel, by using phosphor sheets, then perform image subtraction for these two images, column 5, lines 47-62. At the time the invention was made, a person of ordinary skill in the art would have been motivated to adapt Hishinuma's technique to obtain two radiation images for image subtraction because it provides a subtraction processing method for radiation image more quickly, column 5, lines 41-44.
- b. With regard to Claim 31, see explanation in Claim 30.

Allowable Subject Matter

10. Claims 1-3, 17, 19, 22-24 and 27-29 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

- a. Independent claims 1 and 27 both define features of transferring at least one original radiation image signal, which is among the plurality of the original radiation image signals, to an image output device, prior to the operation-

processed image signal being obtained from the predetermined operation processing, performing image outputting with the image output device and in accordance with the one radiation original image signal having been transferred. These features in combination with other features in claim 1 and 27, which are the broadest allowable claims, are not taught or suggested by the art of record.

- b. Claims 2-3, 17, 19, 22-24 and 29 are dependent upon claim 1.
- c. Claim 28 is dependent upon claim 27.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Capozzi et al, U.S. Patent No. 5,164,993, see figure 12.
- b. Doi et al, U.S. Patent No. 5,343,390, see figure 1B.
- c. Komiya et al, U.S. Patent No. 5,754,676, see figure 1B.
- d. Nagatsuka et al, U.S. Patent No. 5,283,736, see figure 3.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

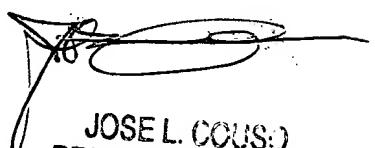
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu



JOSE L. MANCUSO
PRIMARY EXAMINER